

REMARKS

Claims 1, 4-9 and 11 are pending in this application.

By this Amendment, claims 1, 5, 6, 9 and 11 are amended for form, for clarity, and for overcoming §112, first and second paragraph rejections. No new matter is added.

Reconsideration of the application is respectfully requested.

Entry of the amendments is proper under 37 C.F.R. §1.116 because the amendments:

(a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (as the amendments amplify issues previously discussed throughout prosecution); (c) satisfy a requirement of form asserted in the previous Office Action; and (d) place the application in better form for appeal, should an appeal be necessary. Entry of the amendments is thus respectfully requested.

The Office Action rejects claims 1, 4, 5 and 7-11 under 35 U.S.C. §103(a) over U.S. Patent No. 6,811,737 to Fukuta et al. (Fukuta) in view of Japanese Patent Publication No. 09-085481 to Onodera et al. (Onodera) and U.S. Patent No. 4,557,773 to Bonzo; and rejects claim 6 under 35 U.S.C. §103(a) over Fukuta in view of Onodera and Bonzo and further in view of Japanese Patent No. 01-233083 to Kanehara et al. (Kanehara). These rejections are respectfully traversed for at least the following three reasons.

First, claim 1 recites, among other things, "a laser oscillator that oscillates a laser so as to perform cutting processing of the tape bonded onto the end surface of the honeycomb structural body to obtain the honeycomb structural body wherein the tape having a predetermined size along an outer peripheral shape is bonded on the end surface" and "a processing position controller that positions the laser from the laser oscillator so as to cut the bonded tape into an intended shape based on the picked image." In the previous Amendment, Applicants asserted that the applied references fail to teach or render obvious the subject matter recited in claim 1 and there was no rationale for combining Fukuta and Onodera.

The Office Action asserts that Fukuta discloses a method where the image of a honeycomb body is picked up by a camera and the image is processed by an image processing method to detect positions of all the cells of the end surface. The Office Action alleges that it would have been obvious to one of ordinary skill in the art to use the laser of Fukuta to cut the tape along the outer periphery of the end surface. In this regard, the Office Action asserts that if a laser is capable of cutting tape, one could program a pattern that would include both piercing holes and cutting the tape. The Office Action relies on col. 3, lines 37-56 of Fukuta for corresponding with the laser oscillator so as to perform cutting processing of the tape bonded onto an end surface of the columnar honeycomb structural body. The Office Action alleges that using equipment designed to pierce holes to also cut tape would save money because there is no need to add a cutting station.

However, as discussed below, the utilization of the laser oscillator of Fukuta for both cutting processing and hole piercing would rely on impermissible hindsight reasoning because the Examiner derived the cutting capability of the laser oscillator solely from the present application. See Section 2143.01 of the MPEP.

Fukuta merely proposes the use of a film cut in a size sufficient to mask the end of the honeycomb structure by bonding it thereon after the identification of the position of cells using a camera. The image taken by the camera is used just to determine the positions of holes (end faces of cells) to be perforated for the next dipping step to plug the predetermined cells usually in a checkered flag pattern. Therefore, there is no necessity of cutting bonded film anymore, irrespective of the laser oscillator function; in other words, whether or not a laser oscillator is capable of cutting a film is entirely irrelevant. Thus, the assertion that Fukuta would lead one of ordinary skill to use Fukuta's laser for cutting a film is based on impermissible hindsight.

Second, claim 1 also recites "a moving type or tilt type mirror located in a position capable of reflecting a light reflected from the tape bonded to the end surface of the honeycomb structural body on the same axis as the laser oscillated from the laser oscillator and capable of being moved from the position on the same axis when the laser oscillates;" and "an image pick-up unit that picks up an image of the end surface of the honeycomb structural body reflected by the mirror." The Office Action recognizes that Fukuta does not disclose these features, but asserts that Onodera cures the deficiencies of Fukuta. However, one of ordinary skill would not have had a reason to combine Onodera's mirror with Fukuta's system.

In particular, as discussed above, there is no necessity of cutting a bonded tape into a proper size in Fukuta. Thus, there is no necessity of providing a mirror in a position, as is defined in the present application, for picking an image. Accordingly, the asserted combination of Fukuta and Onodera is baseless.

Third, even if combined, Onodera does not cure the deficiencies of Fukuta.

In the present application, a mirror is provided in a position capable of receiving a laser beam, which has been oscillated from a laser oscillator and reflects from a part of a tape being bonded on an end surface of a honeycomb structure. The mirror reflects thus received laser beam for a CCD camera to take an image.

On the other hand, in case of the apparatus disclosed by Onodera, mirrors (5, 7) are provided in a position between a CCD camera and a condenser (condensing lens), a laser beam oscillated from a laser oscillator is sent to one of mirrors 5 with an incident angle, the thus sent laser beam is reflected thereby, and sent again to the other mirror 7 in order to transmit it further to the condenser or a CCD camera through the mirror 7. Thus, in order to transmit a reflected light to the CCD camera through the mirrors (5, 7), the system requires the use of a bendmirror through which a visible light can pass because of its permeability therethrough. Onodera does not disclose anything related to the "on the same axis" feature.

Thus, an ordinary artisan would understand that a mere combination of the teachings of Onodera with those by Fukuta could not lead to the recited invention.

The present application has the advantage that a film provided in the form of a tape is made bonded by roll to roll to a predetermined end surface of a honeycomb structure during its belt-conveyer transferring, the film in thus bonded state is taken as an image by CCD camera, and the film is cut into a predetermined shape using a laser beam based on the taken image in one station. The time required from the starting of conveyer to cutting a film in a predetermined shape based on the taken image is less than 6 seconds (in this respect, see paragraph [0030] of the present specification). By employing one station system, a film in the form of a tape can be sent at the minimum pitch, thereby the utilization rate of a tape can be extremely improved (in this respect, please see also the description of paragraph [0026] of the present specification). A mere combination of the teachings by Onodera with those by Fukuta cannot bring such an improvement (continuous covering with a film (present invention) vs. batch type covering with a cut film (Fukuta)). Also, Bonzo and Kanehara fail to cure deficiencies of Fukuta.

In view of the above at least three reasons, claim 1 and claims 4-9 and 11 depending therefrom, are patentable over the applied references. Accordingly, withdrawal of the rejections of the claims is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 4-9 and 11 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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